Contents of Vol. 158

ELECTRONICS AND OPTICS

Silicon thin films for optoelectronic temperature sensors 1
R. P. Agarwal (Roorkee, India), I. Kajanto and A. T. Friberg (Espoo, Finland)

Magnetization reversal model for vertical recording films 7
V. M. Fedosyuk, L. F. Ilyushenko, M. U. Sheleg and A. V. Boltushkin (Minsk, U.S.S.R.)

Electrical conductance and temperature coefficient of resistivity of double-layer films 13
R. Dimmich (Wrocław, Poland)

Conduction processes in inhomogeneous $CdSe_xTe_{1-x}$ semiconductors 25
A. P. Belyaev and I. P. Kalinkin (Leningrad, U.S.S.R.)

METALLURGICAL AND PROTECTIVE COATINGS

Characterization of cosputtered tungsten carbide thin films 37
H.-Y. Yang, X.-A. Zhao and M.-A. Nicolet (Pasadena, CA, U.S.A.)

Cosputtered $W_{75}C_{25}$ thin film diffusion barriers 45
H.-Y. Yang, X.-A. Zhao and M.-A. Nicolet (Pasadena, CA, U.S.A.)

Solid lubricating fluorine-containing polymer film synthesized by perfluoropolyether sputtering . 51
I. Sugimoto and S. Miyake (Tokyo, Japan)

PREPARATION AND CHARACTERIZATION

The oxidation of PtSi, Pt_2Si and polycrystalline silicon in ultrahigh vacuum residual gas 61
H. C. Swart, C. W. Louw and G. L. P. Berning (Bloemfontein, South Africa)

Preparation and characterization of some tin oxide films 69
T. M. Uen, K. F. Huang, M. S. Chen and Y. S. Gou (Hsinchu, Taiwan)

Characterization of SrF_2 thin films and of SrF_2/InP structures 81
A. S. Barrière, A. Chaouki, G. Gevers, H. Guegan, C. Sribi (Talence, France), D. Bertault (Gradignan, France), C. Hauw (Talence, France) and P. Alnot (Orsay, France)

Polymer–ceramic composite materials with high dielectric constants 93
D. K. Das-Gupta and K. Doughty (Bangor, U.K.)

Thermodynamic investigation of selective tungsten chemical vapour deposition: influence of growth conditions and gas additives on the selectivity in the fluoride process 107
J.-O. Carlsson and A. Hårsta (Uppsala, Sweden)

f.c.c. niobium films grown by halide chemical vapour deposition on ultrasound-vibrating substrates 123
M. Sasaki, M. Koyano, H. Negishi and M. Inoue (Hiroshima, Japan)

Quaternary equilibrium phase diagram for copper, indium, selenium and oxygen 133
B. Haba and C. W. Bates, Jr., (Stanford, CA, U.S.A.)

Pressure stability in reactive magnetron sputtering 141
A. G. Spencer, R. P. Howson and R. W. Lewin (Loughborough, U.K.)

Equilibrium interaction potential and height of an argon adatom on an Ar(001) crystal surface . . 151
P. M. Stoop and J. A. Snyman (Pretoria, South Africa)

LETTER

Light bending and light confinement of isotopic boundaries—possibility of isotopic fiber optics . L37
A. A. Berezin (Hamilton, Ontario, Canada)

Contents of Vol. 158

ELECTRONICS AND OPTICS

Silicon thin films for optoelectronic temperature sensors 1
R. P. Agarwal (Roorkee, India), I. Kajanto and A. T. Friberg (Espoo, Finland)

Magnetization reversal model for vertical recording films 7
V. M. Fedosyuk, L. F. Ilyushenko, M. U. Sheleg and A. V. Boltushkin (Minsk, U.S.S.R.)

Electrical conductance and temperature coefficient of resistivity of double-layer films 13
R. Dimmich (Wrocław, Poland)

Conduction processes in inhomogeneous $CdSe_xTe_{1-x}$ semiconductors 25
A. P. Belyaev and I. P. Kalinkin (Leningrad, U.S.S.R.)

METALLURGICAL AND PROTECTIVE COATINGS

Characterization of cosputtered tungsten carbide thin films 37
H.-Y. Yang, X.-A. Zhao and M.-A. Nicolet (Pasadena, CA, U.S.A.)

Cosputtered $W_{75}C_{25}$ thin film diffusion barriers 45
H.-Y. Yang, X.-A. Zhao and M.-A. Nicolet (Pasadena, CA, U.S.A.)

Solid lubricating fluorine-containing polymer film synthesized by perfluoropolyether sputtering . 51
I. Sugimoto and S. Miyake (Tokyo, Japan)

PREPARATION AND CHARACTERIZATION

The oxidation of PtSi, Pt_2Si and polycrystalline silicon in ultrahigh vacuum residual gas 61
H. C. Swart, C. W. Louw and G. L. P. Berning (Bloemfontein, South Africa)

Preparation and characterization of some tin oxide films 69
T. M. Uen, K. F. Huang, M. S. Chen and Y. S. Gou (Hsinchu, Taiwan)

Characterization of SrF_2 thin films and of SrF_2/InP structures 81
A. S. Barrière, A. Chaouki, G. Gevers, H. Guegan, C. Sribi (Talence, France), D. Bertault (Gradignan, France), C. Hauw (Talence, France) and P. Alnot (Orsay, France)

Polymer–ceramic composite materials with high dielectric constants 93
D. K. Das-Gupta and K. Doughty (Bangor, U.K.)

Thermodynamic investigation of selective tungsten chemical vapour deposition: influence of growth conditions and gas additives on the selectivity in the fluoride process 107
J.-O. Carlsson and A. Hårsta (Uppsala, Sweden)

f.c.c. niobium films grown by halide chemical vapour deposition on ultrasound-vibrating substrates 123
M. Sasaki, M. Koyano, H. Negishi and M. Inoue (Hiroshima, Japan)

Quaternary equilibrium phase diagram for copper, indium, selenium and oxygen 133
B. Haba and C. W. Bates, Jr., (Stanford, CA, U.S.A.)

Pressure stability in reactive magnetron sputtering 141
A. G. Spencer, R. P. Howson and R. W. Lewin (Loughborough, U.K.)

Equilibrium interaction potential and height of an argon adatom on an Ar(001) crystal surface . . 151
P. M. Stoop and J. A. Snyman (Pretoria, South Africa)

LETTER

Light bending and light confinement of isotopic boundaries—possibility of isotopic fiber optics . L37
A. A. Berezin (Hamilton, Ontario, Canada)

ELECTRONICS AND OPTICS

Magnetic and magnetoresistive properties of multilayered Permalloy thin films 167
M. Kitada and N. Shimizu (Tokyo, Japan)

Photoconductivity studies of indium/epindolidione/indium tin oxide sandwich cells 175
D. S. Weiss and M. Burberry (Rochester, NY, U.S.A.)

Comparison of the electrical properties of polyimide films containing surface metal oxide: cobalt oxide *vs.* tin oxide 189
J. D. Rancourt, G. M. Porta and L. T. Taylor (Blacksburg, VA, U.S.A.)

The temperature dependence of electron emission from a discontinuous carbon film device between silver film electrodes 207
H. Araki and T. Hanawa (Osaka, Japan)

Density of states in a-Si:H, Cl determined by space-charge-limited currents 217
T. Ligonzo, R. Murri, V. Augelli and L. Schiavulli (Bari, Italy)

METALLURGICAL AND PROTECTIVE COATINGS

Dependence of microstructure of TiN coatings on their thickness 225
V. Valvoda, R. Černý, R. Kužel, Jr., J. Musil and V. Poulek (Prague, Czechoslovakia)

Deposition of hard carbon films by the r.f. glow discharge method 233
K. Kobayashi, N. Mutsukura and Y. Machi (Tokyo, Japan)

PREPARATION AND CHARACTERIZATION

Columnar structure of obliquely deposited iron films prepared at low substrate temperatures . . . 239
K. Hara, M. Kamiya (Kumamoto, Japan), T. Hashimoto (Tottori, Japan), K. Okamoto (Chiba, Japan) and H. Fujiwara (Hiroshima, Japan)

Kinetics of growth of anodic oxide film on niobium in aqueous electrolyte 245
R. K. Nigam, K. C. Singh and S. Maken (Rohtak, India)

The metastable C49 structure in sputtered $TiSi_2$ thin films 255
W. Bretschneider, G. Beddies (Karl-Marx-Stadt, G.D.R.) and R. Scholz (Halle, G.D.R.)

High rate jet plasma-assisted chemical vapour deposition 265
L. Bárdoš and V. Dušek (Prague, Czechoslovakia)

A solution growth technique for the deposition of manganese sulphide thin film 271
P. Pramanik, M. A. Akhter and P. K. Basu (Kharagpur, India)

Preparation and electrochemical behaviour of some metal oxide films. 277
W. A. Badawy and E. El-Taher (Giza, Egypt)

Characterization of $MoSe_2$ thin films 285
A. Mallouky and J. C. Bernède (Nantes, France)

Growth processes in amorphous metallic films: a computer simulation 299
R. Manaila, A. Devenyi (Bucharest, Romania), P. B. Barna and G. Radnoczi (Budapest, Hungary)

GENERAL FILM BEHAVIOUR

Local equilibrium model of morphological instabilities in chemical vapor deposition 313
B. J. Palmer and R. G. Gordon (Cambridge, MA, U.S.A.)

LETTERS

Optical properties of sputtered AlN films and coated GaAs L39
D.-H. Wang and L. Guo (Beijing, China)

Screen-printed superconducting films of Y–Ba–Cu–O L45
A. K. Gupta, V. S. Tomar, M. Johri, N. D. Kataria, S. K. Agarwal, B. Jayaram and A. V. Narlikar (New Delhi, India)

Electromechanical properties of thin VO_2 films on polyimide substrates. L49
M. O. Hakim, S. M. Babulanam and C. G. Granqvist (Gothenburg, Sweden)

AUTHOR INDEX 343